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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,569	09/08/2003	Yuji Akimoto	Komatsu Case 293	9860

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EXAMINER	
WYSZOMIERSKI, GEORGE P	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,569	AKIMOTO ET AL.	
	Examiner	Art Unit	
	George P. Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *6-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 12-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4/27/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

5.00

1. Applicant's election with traverse of Group I, claims 1-5 in the reply filed on June 13, 2005 is acknowledged. The traversal is on the ground(s) that a search for the elected invention would necessarily entail a search of the non-elected invention. This is not found persuasive because a search for the non-elected invention would require searching in several areas not relevant to the elected invention, as set forth in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

2. The substitute specification filed with the response of June 13, 2005 has been entered.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. (PG Pub. no. 2002/0000137).

Akimoto discloses producing highly crystallized metal or alloy powders by preparing raw material powders containing compounds of one or a plurality of metals desired, supplying those powders to a reaction vessel together with a carrier gas, and producing metal powders by heating under temperature and concentration conditions as recited in the last seven lines of instant claims 1 or 5. With respect to instant claim 2, note paragraph [0021] of Akimoto. With

respect to instant claim 3, the examiner's position is that whatever the particle size is of the raw material powder in the prior art fully meets the limitations of this claim; nonetheless, note paragraph [0022] of Akimoto for a discussion of adjusting particle size. With respect to new claims 12-14, Table 1 of Akimoto discloses specific embodiments of the prior art which meet the limitations of these claims.

Akimoto does not disclose the ratio V/S > 600 (of flow rate of carrier gas to cross sectional area of nozzle) as defined in the instant claims. However, the examiner notes that the prior art involves a process of making substantially the same powders as the present invention (Ni, Ni-Cu, Pd-Ag) from the same raw materials (e.g. nickel acetate tetrahydrate). The examiner's position is that performing the prior art process under the conditions as specified in the instant claims would fall within the purview of the Akimoto process. Therefore, the Akimoto et al. disclosure is held to create a prima facie case of obviousness of the presently claimed invention.

5. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al., as above, in view of Gonzalez et al. (U.S. Patent 5,508,015).

Gonzalez, column 3, lines 7-42 indicates that it was known in the art, at the time of the invention, that it is preferable to employ a high ratio of carrier gas to a nozzle size with minimum cross-sectional area in processes of making powders by the reaction of raw material powders. Therefore, to employ the high ratio as presently claimed when performing the process as disclosed by Akimoto et al. would have been considered an obvious expedient by one of ordinary skill in the art.

6. Claims 1-5 and 12-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/630394.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '394 claims are drawn to a series of process steps for making highly crystallized powders by reacting starting material components in a carrier gas under the same set of temperature, concentration, and gas flow rate to nozzle opening ratios in both instances. The difference between the present claims and the '394 claims is that the presently claimed process results in metal powders, while that of the '394 claims results in oxide powders. The examiner's position is that one of ordinary skill in the art would easily be able to select appropriate starting materials so that the formation of either a metal powder or an oxide powder would be thermodynamically favorable, i.e. one would be able to determine this by consulting standard reference textbooks for the heats of formation of starting materials, and the relevant metals and oxides. Because the same process steps are employed under the same set of conditions in both the present claims and the '394 claims, no patentable distinction is seen between the processes as defined in the two sets of claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. In a response filed June 13, 2005, Applicant alleges that the claimed V/S ratio is critical to the invention and achieves results not contemplated or obvious from the prior art to Akimoto and/or Gonzales. Applicant specifically points to the average particle size or ratio of maximum to average particle size achieved by use of the claimed V/S

ratio. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) The particle sizes, as well as the ratio of average to maximum particle size, significantly overlap in the prior art and the present invention. Note particularly Akimoto examples 4 and 9, in which the ratio of maximum to average particle size is 3.5/1.5 or 2.33, and 1.3/0.6 or 2.17, respectively.

b) With regard to a comparison of Akimoto example 1 to present example 1, the average particle size in Akimoto example 1 is 0.5 microns, while that in the present example is stated to be 0.51 microns, not a statistically significant difference.

c) With regard to the comparison of invention example 1 to comparative example 1, this comparison cannot be said to show a criticality of a V/S ratio > 600. The comparative example uses a V/S of 400, 33% less than the alleged critical value, while the invention example uses a V/S of 1500, 2.5 times the alleged critical value. Nothing in the disclosure regarding these examples can be said to show that a V/S minimum value of 600 is critical to achieving any particular effects.

Applicant further alleges that the instant claims are patentably distinct from the claims of the '394 application because the two sets of claims utilize different heating conditions to produce different products. In response, the examiner notes that the heating conditions significantly overlap in the two sets of claims, i.e. "not lower than (Tm - 200)" in the instant claims, and not lower than Tm/2 in the '394 claims. Further, as stated in the rejection supra, one of skill in the art would easily be able to determine the

appropriate temperatures to produce metals or oxides, as desired, by consulting standard reference textbooks.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective July 15, 2005, all patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1100

GPW
August 25, 2005